Docket No.: GB920020095US1 (7161-242U) **PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	:	Customer Number: 46320
Richard KNOX, et al.	:	Confirmation Number: 8594
Application No.: 10/662,009	:	Group Art Unit: 2162
Filed: September 11, 2006	:	Examiner: G. Colan

For: REAL TIME XML DATA UPDATE IDENTIFICATION

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief is submitted under 37 C.F.R. § 41.41 in response to the EXAMINER'S ANSWER dated July 10, 2007.

The Examiner's response to Appellants' arguments submitted in the Appeal Brief of March 23, 2007, raises additional issues and underscores the factual and legal shortcomings in the Examiner's rejection. In response, Appellants rely upon the arguments presented in the Appeal Brief of March 23, 2007, and the arguments set forth below.

Referring to the last full paragraph on page 12 of the Examiner's Answer, Appellants note that the term "data field" used by Appellants on page 8 of the Appeal Brief and identified by the Examiner as not being recited in the claims is a typographical error. As described throughout the Appeal Brief (see, for example, the paragraph spanning pages 6 and 7 of the Appeal Brief), Appellants intent was to refer to the claimed "data file."

In the paragraph spanning pages 12 and 13 of the Examiner's Answer, the Examiner further asserted the following:

> Also, in response to appellant's arguments, the recitation "the meaning of the data file being insensitive to the ordering of the blocks of data with the data file" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Based upon the Examiner's own description of the case law, it is readily apparent that the present claims do not fall within the fact patterns described by the case law. The recitation that the "the meaning of the data file being insensitive to the ordering of the blocks of data within the data file" is neither "the purpose of a process" nor "the intended use of a structure." Moreover, the Examiner cannot reasonably argue that "the body of the claim does not depend on the preamble for completeness," since the body of claim 1 refers extensively to "the data file" and also notes that "said second checksum being insensitive to the ordering of the blocks of data within the data file." Thus, Appellants submit that the Examiner has improperly ignored this limitation.

In lines 14-18 on page 13 of the Examiner's Answer, the Examiner asserted the following:

> Regarding the ordering of the blocks claimed, examiner interprets that since Lai's disclosure stores data records of the file, such as, filename and path; data can be located even though it is not in a specified order in the directory (Col. 3, lines 45-47, Lai). This makes Lai's procedure insensitive to the ordering of the files.

For ease of reference, column 3, lines 45-47 of Lai is reproduced below:

> The data directory is searched according to the checksum, the filename, and the size of the online file.

Appellants do not understand the point attempted to be made by the Examiner. As claimed, "the meaning of the data file [is] insensitive to the ordering of the blocks of data within the data file," and support for this limitation can be found on page 6, line 29 through page 7, line 3 of Appellants' disclosure." However, the Examiner assertion that "[t]his makes Lai's procedure insensitive to the ordering of the files" and the citation to column 3, lines 45-57 does not make sense to Appellants. This passage does not refer to the ordering of the data files. Moreover, even though the data of Lai may not be in a specified order, one cannot conclude that the meaning of the data is insensitive to the order of the blocks of data within the data file, as claimed. In this regard, Appellants also note that the Examiner is making an inherency argument without factual support.

In lines 8-21 on page 14 of the Examiner's Answer, the Examiner further asserted the following:

> Thus, it is clear that the claimed invention utilizes the XOR algorithm to make such checksum insensitive to the ordering of the blocks of data with the data file. The combination of Lai in view of Bradshaw explicitly teaches the XOR algorithm on the second checksum (See - Fig. 4, as cited above, Col. 3, lines 9 - 16, "...the corresponding contents in these regions are calculated with XOR (exclusive or) operation, thus obtaining a sample region", and also lines 23 — 28, ". . . First the content of the file is divided into several regions 410, 420 430. The corresponding contents in

> these regions are calculated by XOR, thus a sample region 500 is obtained. For example, the contents 415, 425, ..., and 435 are calculated by XOR.", Lai). According to Hargrave's Communications Dictionary, Wiley from Wiley (Copyright 2001 by the Institute of Electrical and Electronics Engineers, Inc) exclusive OR (XOR) Truth Table shows inputs A, and B; which when input A=0 and B=l, output =1; and when input A=1 and B=0, output =1; which shows that the output does not change with the order of the input, being insensitive to the ordering.

As asserted by the Examiner, use of the XOR algorithm makes a checksum insensitive to the ordering of data. The Examiner, however, with regard to the claimed invention, is applying the teachings of apples to oranges.

Referring to the last full paragraph on page 4 of the Examiner's Answer, the Examiner stated the following:

> providing each of said plurality of blocks of data with a first checksum (Col. 1 and 2, lines 64 - 66 and 1 - 5; respectively, "... the method to calculate the checksum of a file is to divide the content of the file into plurality of regions. Thereafter, the corresponding contents in these regions are calculated with XOR (exclusive or) operation, thus obtaining a sample region. Then the sample contents with a predetermined offset in the sample region are summed into several sub-checksum values ... ; Lai);

Thus, the Examiner is relying on the teaching of the XOR algorithm by Lai with regard to the claimed <u>first</u> checksum.

As to the second checksum, the Examiner stated the following in the first full paragraph on page 5 of the Examiner's Answer:

> providing each of said versions of the data file with a second checksum of the said version of the data file as a whole, said second checksum being insensitive to the ordering of the blocks of data within the data file (Col. 2, lines 60 - 65, Lai[2]);

This discussion, however, is silent as to a second checksum being performed with the XOR algorithm. On the contrary, reference is made to column 1, line 64 through column 2, line 5 of Lai, which is reproduced below:

> According to the embodiments of the present invention, the method to calculate the checksum of a file is to divide the content of the file into a plurality of regions. Thereafter, the corresponding contents in these regions are calculated with XOR (exclusive or) operation, thus obtaining a sample region. Then, the sample contents with a predetermined offset in the sample

> region are summed into several sub-checksum values. Finally, these sub-checksum values are combined to obtain the checksum of the file.

As discussed therein, the corresponding contents in regions (of the divided file) are calculated with XOR (i.e., allegedly corresponding to the claimed "providing each of said plurality of blocks of data with a first checksum"). Then, the sample contents are summed into several sub-checksum values and combined to obtain a checksum of the file (i.e., allegedly corresponding to the claimed "second checksum of the said version of the data file as a whole").

However, as described in the above-reproduced passage the "checksum of the file" (i.e., the data file as a whole) as taught by Lai, is not obtained using the XOR operation so as to be insensitive to the ordering of the blocks of data within the data file, as claimed. Instead, the XOR operation occurs during the calculation of the corresponding contents (i.e., allegedly corresponding to the claimed first checksum). Thus, the Examiner has taken a teaching in Lai associated with the alleged first checksum and improperly asserted that that this teaching applies to the alleged second checksum. Therefore, the Examiner has mischaracterized the teachings of Lai.

In the first and second paragraphs on page 15 of the Examiner's Answer, the Examiner wrote the following:

> Appellant argues that; "it is readily apparent that the first and second checksums identified by the Examiner in Bradshaw do not correspond to the claimed first and second checksum"; by stating that the "new checksum disclosed by Bradshaw does not correspond to the claimed first checksum (i.e. of the plurality of blocks of data is provided with a first checksum)", and that such checksum is "the same checksum that the Examiner identified as the second checksum".
>
> Examiner respectfully disagrees. First, in response to applicant's arguments against the references individually (Bradshaw in this case), one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

> *Keller*, 642 F.2d 413, 208 USPO 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The Examiner explicitly relies upon Bradshaw to disclose limitations as to both the claimed first and second checksums. Thus, for the Examiner's to assert that the alleged teachings in Bradshaw as to these checksums can be used to establish that the claimed limitations as to the first and second checksums are obvious, the Examiner has to show that one having ordinary skill in the art would recognize that teachings as to one pair of checksums (i.e., those taught by Bradshaw) are applicable to the another pair of checksums (i.e., corresponding to those claims).

Just as all computers, all automobile engines, all GPS systems, and all telephones are not identical and the teaching as to, for example, one GPS system may not be applicable to another GPS system, not all checksums are identical and teachings as to one pair of checksums may not be applicable to another pair of checksums. Appellants' position is that the checksums described by Bradshaw are not comparable to the claimed checksums, and thus, the Examiner has failed to establish that one having ordinary skill in the art would have recognized that the teachings, in Bradshaw, as to a pair of checksums are applicable to the claimed first and second checksums.

The Examiner further asserted the following in the paragraph spanning pages 15 and 16 of the Examiner's Answer:

> Second, as stated in the Office Action above (rejection of claim 1), the combination of Lai in view of Bradshaw does disclose: "providing each of said plurality of blocks of data with a first checksum"; and second checksum (Col. 1, lines 64 - 66 and 1 - 5; respectively; "... the method to calculate the checksum of a file is to divide the content of the file into plurality of regions. Thereafter, the corresponding contents in these regions are calculated with XOR (exclusive or) operation, thus obtaining a sample region. Then the sample contents with a predetermined offset in the sample region are summed into several sub-checksum values , also Col. 2, lines 60— 65: " ... If the file is updated as a new file, the checksum of the new file is

> calculated, and the checksum, the filename, and the size of the new file are stored into the data directory. The checksum and data record of the file is calculated again if the file is updated..."; Wherein the updated file corresponds to the new version of the file, the checksum of this new file corresponds to the first checksum, and the checksum of the file when is updated again corresponds to the second checksum as claimed; Lai). Also as discussed in this Office Action above, the Bradshaw reference was used in the combination for the purpose of teaching: comparing checksums of the versions of the data file. (emphasis added)

This Examiner's assertion as to what, in Lai, constitutes the first checksum and the second checksum ignores the claimed limitations. The Examiner is apparently asserting "the checksum of this new file corresponds to the first checksum, and the checksum of the file when is updated again corresponds to the second checksum." This assertion, however, ignores the claimed limitations.

Specifically, claim 1 recites that "each of said plurality of blocks of data [are provided] with a first checksum." As noted in the preamble, "the data file having a plurality of blocks of data." Claim 1 further recites "providing each of said versions of the data file with a second checksum of the said version of the data file as a whole." Thus, the claimed first checksum is for each of the plurality of blocks of data, which are constituent parts of the data file, whereas the claimed second checksum is for the data file, as a whole. On the contrary, the Examiner assertion as to what identically discloses the claimed first and second checksum are both checksums of the whole file (i.e., the checksum of new file and the checksum of the updated file). Thus, the Examiner is again mischaracterizing the teachings of the applied prior art.

On page 9-11 of the Appeal Brief, Appellants addressed the Examiner's asserted motivation to modify Lai in view of Bradshaw. The Examiner's response to these arguments are

found in the last three full paragraphs on page 16 of the Examiner's Answer and reproduced below:

> Appellant questions Examiner's reasons for combination of the teachings of Lai and Bradshaw.
>
> Examiner is not persuaded. The reason for combination is clearly stated in above Office Action. For the reader's convenience, it is repeated bellow:
>
> It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Bradshaw's teachings, with respect to comparing the checksums, to Lai's system. Skilled artisan would have been motivated to do so, as suggested by Bradshaw (Page 10, [0081], Bradshaw), for the purpose of checking elements for accuracy. Additionally, skilled artisan would have been motivated to do so also because a checksum is a calculated value that is used to detect errors.

The Examiner's response, however, has not specifically addressed Appellants' arguments. Instead, the Examiner essentially states "I disagree" and repeats that Examiner's previous asserted motivation to modify Lai in view of Bradshaw.

Regarding claims 2, 4, 7, and 9 and the motivation to modify the combination of Lai and Bradshaw in view of Squibb, Appellants presented similar arguments on page 12 to those found on page 11 of the Appeal Brief. Specifically, the Examiner has failed to establish a nexus between the proposed modification and the asserted benefit associated with that modification. The Examiner's response on page 17 does not address this issue.

Moreover, Appellants also note that the Examiner has relied upon the teachings in Lai as to the use of the XOR algorithm. This algorithm appears to be used, in certain portions of the Examiner's argument,[1] in calculating the claimed first checksum. However, as asserted by the Examiner, use of the XOR algorithm makes a checksum insensitive to the ordering of data, yet

[1] As is evident from the above passages, the Examiner appears to be relying upon different teachings in Lai to disclose the claimed first checksum.

claims 2 and 7 recite that the first checksum is sensitive to the ordering of the data within a block of data. Thus, the Examiner's cited reference of Lai teaches away from the claimed invention.

For the reasons set forth in the Appeal Brief of March 23, 2007, and for those set forth herein, Appellants respectfully solicit the Honorable Board to reverse the Examiner's rejections under 35 U.S.C. § 103.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: September 10, 2007

Respectfully submitted,

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